

BRUINVELS
Appl. No. 10/550,145
December 6, 2007
Amendment

REMARKS

Reconsideration is requested.

Claims 27-46 and 52 are pending. Claims 29-33, 36, 39-43 and 46 have been withdrawn from consideration. Claims 32 and 42 have been additionally indicated above as having been withdrawn from consideration as the applicants believe the claims do not read on the elected species (i.e., deramciclane and N-desmethyl-deramciclane).

The Examiner acknowledges the applicants claim for priority benefit of GB 0306604.0 while on page 1 of the Action indicating that only "some" of the certified copies of priority documents have been received. The Notice of Acceptance dated July 10, 2006, confirms priority documents have been received. Moreover, the Bib Data Sheet dated August 6, 2007, contained in the Image File Wrapper indicates that the conditions for claiming priority benefit have been satisfied. The Examiner is requested to confirm receipt of the required certified copy of the priority document and that all of the requirements to be afforded benefit of the priority filing have been satisfied.

The Section 112, first paragraph, rejection of claims 32 and 42 is obviated by the above as the claims are believed to not read on the elected species and therefore are not believed to be the subject of search and examination of this application.

The applicants request that the Examiner provide an opportunity to amend the specification to include subject-matter which might be examined on a broader search at a later time.

The Section 103 rejection of claims 27, 28, 34, 35, 37, 38, 44, 45 and 52 over U.S. Patent No. 6,589,996 in view of Meltzer (*Neuropsychopharmacology* 21(2S):106S-

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115S, August 1999), is traversed. Reconsideration and withdrawal of the rejection are requested in view of the following distinguishing comments.

The cited patent is understood to teach only dosages, indicating that deramciclane may be administered to treat serotonergic disorders, such as depression and anxiety. Negative symptoms of schizophrenia are not mentioned. The applicants further understand Meltzer, far from making obvious the use of a 5HT2C receptor antagonist for the treatment of negative symptoms, instead indicates that 5HT2C receptor antagonism should be avoided as the effects thereof may be counter-productive to the (desirable) antagonistic effects on the 5HT2A receptor.

Specifically, the Examiner is urged to appreciate that schizophrenia, suicidality and cognitive dysfunction are linked as there is a proportion of schizophrenic patients demonstrating suicidal behaviour and considerable cognitive deficits. This group in particular may benefit from the suggested therapy.

The cited patent teaches a dose range at which deramciclane should be administered to treat disorders of the serotonergic system such as depression and anxiety. There is no mention or suggestion in the patent that schizophrenia and the indications which are the subject of the present application are a serotonergic disorder. Further, a person of ordinary skill in the art would not have considered schizophrenia a purely serotonergic disorder. Therefore the Examiner appears to have based the rejection on information which is not disclosed in the cited patent nor generally found in the cited art.

Meltzer is understood to state that “the 5-HT_{2c} receptor appears to diminish some of the actions of 5-HT_{2a} receptor antagonism” (see abstract) and although the paper

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mentions that “5-HT_{2a} or 5-HT_{2a/2c} antagonists, appear to be more effective in decreasing negative symptoms than haloperidol...” the applicants believe that they clearly suggest that “5-HT_{2a} receptor blockade may play a key role in the treatment of negative symptoms...” (page 109S).

The applicants believe that the Examiner has interpreted that the cited reference teaches 5-HT2C receptor antagonists may be useful to treat negative symptoms of schizophrenia out of context as Meltzer would be understood by one of ordinary skill in the art to teach that although 5-HT2A/2C antagonists may be useful to treat this condition that it is actually the 5-HT2A component that is responsible for this activity and, even stronger, that the 5-HT2C component reduces the 5-HT2A antagonistic efficacy.

The Examiner is understood to infer that the Meltzer reference identifies 5-HT2A and 5-HT2C receptor antagonists as having greater efficacy to reduce negative symptoms (Page 106S and abstract). The Meltzer reference however is believed to state that “[i]t has also been demonstrated that clozapine can improve the negative symptoms of schizophrenia...” (page 106S) and that “...potent 5-HT_{2a} receptor antagonists and relatively weaker dopamine D₂ receptor antagonists ... share ... low extrapyramidal side effects at clinically effective doses and possibly greater efficacy to reduce negative symptoms” (Abstract).

Thus, following the Meltzer article, one of ordinary skill would believe that 5-HT2C receptor antagonism should be avoided, as it may be counterproductive to the 5-HT2A receptor antagonist effects.

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Finally the cited Meltzer reference is understood to highlight how 5-HT2C receptor antagonism may oppose the beneficial effect of 5-HT2A antagonists: "To test the contribution of 5-HT_{2a} receptor antagonism to antipsychotic drug action, clinical trials of ritanserin, a 5-HT_{2a} and 5-HT_{2c} antagonist, have been conducted. Although the data suggest little or no beneficial effect ... this may be due to two factors: a) 5-HT_{2c} receptor antagonism opposes the beneficial effects of 5-HT_{2a} receptor blockade ..." (Page 108S).

In view of the above, the applicants believe that the claimed invention would not have been obvious in view of the cited art.

Withdrawal of the Section 103 rejection is requested.

The claims are submitted to be in condition for allowance, at least to the extent they have been examined, and an indication of allowance is requested.

The Examiner is requested to contact the undersigned, preferably by telephone, in the event anything further is required in this regard.

Respectfully submitted,

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